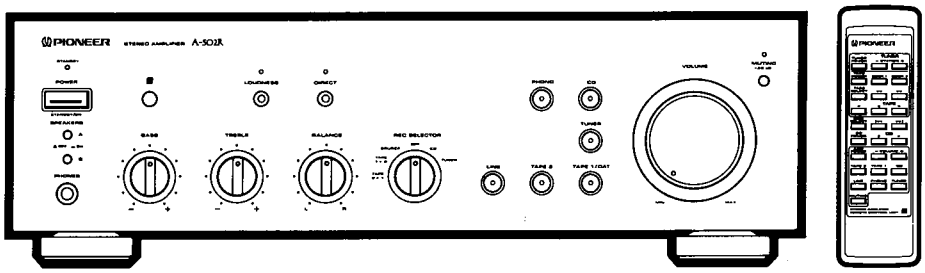
Operating Instructions

STEREO AMPLIFIER

A-502R

HB



Thank you for buying this Pioneer product.
Please read through these operating instructions so you will know how to operate your model properly. After you have finished reading the instructions, put them away in a safe place for future reference.
In some countries or regions, the shape of the power plug and power outlet may sometimes differ from that shown in the explanatory drawings. However, the method of connecting and operating the unit is the same.

WARNING: TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

"This product complies with the Radio Interference requirements of the EC (European Community) Directive 87/308/EEC."

IMPORTANT

The lightning flash with arrowhead, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN

CAUTION:
TO PREVENT THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

IMPORTANT

FOR USE IN THE UNITED KINGDOM

The wires in this mains lead are coloured in accordance with the following code:
blue neutral
brown live
If the plug provided is unsuitable for your socket outlets, the plug must be cut off and a suitable plug fitted.

The cut-off plug should be disposed of and must not be inserted into any 13 amp socket as this can result in electric shock. The plug or adaptor or the distribution panel should be provided with 13 amp fuse. As the colours of the wires in the mains lead of this appliance may not correspond with coloured markings identifying the terminals in your plug, proceed as follows:
The wire which is coloured blue must be connected to the terminal which is marked with the letter N or coloured black.
The wire which is coloured brown must be connected to the terminal which is marked with the letter L or coloured red.

Do not connect either wire to the earth terminal of a three pin plug.

NOTE
After replacing or changing a fuse, the fuse cover in the plug must be replaced with a fuse cover which corresponds to the colour of the insert in the base of the plug or the word that is embossed on the base of the plug, and the appliance must not be used without a fuse cover. If lost, replacement fuse covers can be obtained from your dealer.
This appliance is rated at 13 amps.
Only 13 amp fuses approved to B.S. 1362 A.S.T.A. should be used.

PIONEER®
The Art of Entertainment

CONTENTS

FEATURES 2
INSTALLATION 2
PANEL FACILITIES 3
CONNECTIONS 6
OPERATIONS 8
REMOTE CONTROL 9
TROUBLESHOOTING 11
SPECIFICATIONS 12

FEATURES

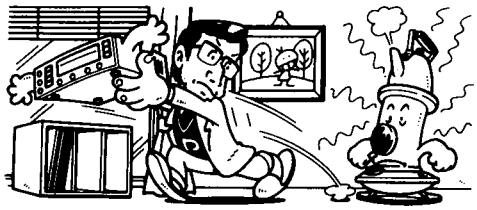
- Drive capacity 100 W + 100 W/4 Ω (DIN) matching to high power and low impedance type speaker system.
- Remote-control amplifier with high-sound-quality performance. Function controls utilize motorized rotary switches to assure the highest in sound quality.
- High- Current Drive Circuit
  This circuit boosts audio signal current for improved suppression of noise, while a special 2-stage volume circuit improves S/N ratio during actual operation.
- Chamber construction
  The AC power supply and audio circuits are separated by a metal shield in order to reduce the effect of mains-borne noise and transformer flux leakage. The metal shield also suppresses resonances and vibrations in the unit.
- "AERO" Heat sink
  The highly rigid, curved fins help suppress resonance to assure clear reproduction.
- High channel separation design
  The high-current drive circuit and channel separation enhancer circuit assure exceptionally clear channel separation.
- "DIRECT" switch
  For bypassing all secondary circuits except for volume; highest purity results.
- Silent microprocessor system
  Clock stops whenever the computer is not in use, to avoid digital noise.

INSTALLATION

LOCATION

Install the amplifier in a well ventilated location where it will not be exposed to high temperature or humidity.

Do not install the amplifier in a location which is exposed to direct rays of the sun, or near hot appliances or radiators. Excessive heat can adversely affect the cabinet and internal components. Installation of the amplifier in a damp or dusty environment may result in malfunction or accident. (Also avoid installation near cookers etc., where the amplifier may be exposed to smoke from oil, steam or heat.)



POWER-CORD CAUTION

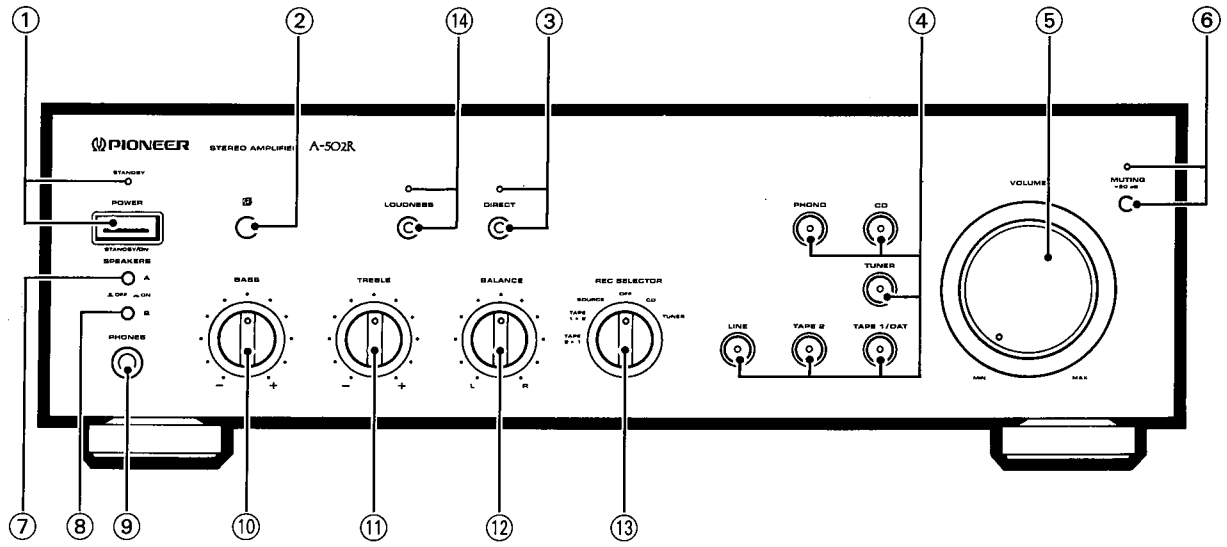
Handle the power cord by the plug. Do not pull out the plug by tugging the cord and never touch the power cord when your hands are wet as this could cause a short circuit or electric shock. Do not place the unit, a piece of furniture, etc,. on the power cord, or pinch the cord. Never make a knot in the cord or tie it with other cords. The power cords should be routed such that they are not likely to be stepped on. A damaged power cord can cause fire or give you an electrical shock. Check the power cord once in a while. When you find it damaged, ask your nearest PIONEER authorized service center or your dealer for a replacement.

MAINTENANCE OF EXTERNAL SURFACES

- Use a polishing cloth or dry cloth to wipe off dust and dirt.
- When the surfaces are very dirty, wipe with a soft cloth dipped in some neutral cleanser diluted 5 or 6 times with water, and wrung out well, and then wipe again with a dry cloth. Do not use furniture wax or cleaners.
- Never use thinners, benzine, insecticide sprays and other chemicals on or near this unit, since these will corrode the surfaces.

PANEL FACILITIES

[FRONT PANEL]



① POWER STANDBY/ON switch/indicator

This is the switch for electric power.

ON: When set to the ON position, power is supplied and the unit becomes operational.

STANDBY: When set to the STANDBY position, the main power flow is cut and the unit is no longer fully operational. A minute flow of power feeds the unit to maintain operation readiness.
When the STANDBY indicator lights, the unit is in STANDBY.

② Remote control sensor window

③ DIRECT button/indicator

Use this button/indicator when you do not wish to pass the output from input terminal equipment through the various frequency adjusting circuits (BASS, TREBLE, BALANCE, LOUDNESS) and adaptor terminals (ADAPTOR).

On: The indicator lights: The signals input through the input terminals are reproduced without passing through the various frequency adjusting circuits. This results in flat, pure sound which is a more faithful reproduction of the input source.

Off: The indicator goes out: The signal passes through the various frequency adjusting circuits.

④ Input selector buttons/indicators

Use to select the playback source.

LINE: For playback with a component connected to Line terminal.

TUNER: For AM or FM broadcast reception with a tuner.

PHONO: For record playback with a turntable.

CD: For compact disc playback with a CD player.

TAPE 1/DAT: For playback with a cassette deck or digital audio cassette deck connected to TAPE 1/DAT terminals.

TAPE 2: For playback with a cassette deck connected to TAPE 2 terminals.

NOTE:

Circuit switching is performed by motor-driven rotary switches. Therefore, there is a slight time lag between pressing of the button and switching.

⑤ VOLUME control

Use to adjust the volume level.

NOTE:

This unit is equipped with a circuit that attenuates LOUDNESS and TONE effects as volume is turned up.

⑥ MUTING button/indicator

Use to temporarily lower sound volume.

On: The indicator lights.
The sound volume is lowered to one-hundredth (−20 dB).

Off: The indicator goes off.
The sound will return to its previous volume.

⑦ SPEAKERS A selector button

Use this button to listen to the speaker systems connected to SPEAKERS A terminals.

ON (▬): Depressed position: Sound is heard from the speaker systems.

OFF (■): Released position: No sound is heard from the speaker systems. Set to this position when listening with headphones.

⑧ SPEAKERS B selector button

Use this button to listen to the speaker systems connected to SPEAKERS B terminals.

ON (▬): Depressed position: Sound is heard from the speaker systems.

OFF (■): Released position: No sound is heard from the speaker systems. Set to this position when listening with headphones.

⑨ PHONES jack

When using headphones, insert the plug into this jack.

⑩ BASS tone control

Use to adjust the low-frequency tone. The center position is the flat (normal) position. When turned to the right, low-frequency tones are emphasized; when turned to the left, low-frequency tones are de-emphasized.

NOTE:

- *This control does not operate when DIRECT button is in the on position.*
- *When the indicator on the volume knob is positioned before the 11 o'clock position, the set tone control effect is obtained.*
  When the indicator on the volume knob is positioned past the 11 o'clock position, the effect becomes increasingly weaker.

⑪ TREBLE tone control

Use to adjust the high-frequency tone. The center position is the flat (normal) position. When turned to the right, high-frequency tones are emphasized; when turned to the left, high-frequency tones are de-emphasized.

NOTE:

- *This control does not operate when DIRECT button is in the on position.*
- *When the indicator on the volume knob is positioned before the 11 o'clock position, the set tone control effect is obtained.*
  When the indicator on the volume knob is positioned past the 11 o'clock position, the effect becomes increasingly weaker.

⑫ BALANCE control

Should normally be left in the center position. Adjust balance if the sound is louder from one of the speakers. If the right side is louder, turn toward the L position and if the left side is louder, turn toward the R position.

NOTE:

This function does not operate when DIRECT button is in the on position.

⑬ REC SELECTOR switch

When this switch is set to a position other than SOURCE or OFF, the equipment selected by REC SELECTOR switch can be recorded from, irrespective of the settings of the input selector buttons and DIRECT button.

TUNER: To record from the equipment connected to TUNER terminals.

CD: To record from the equipment connected to CD terminals.

OFF: In this position, nothing from the REC terminals of TAPE 1/DAT and TAPE 2 is output. Set to this position when not recording; the cassette deck will be disconnected, improving sound quality.

SOURCE: To record from the equipment selected by INPUT SELECTOR switch.

TAPE 1 ► 2: To record (copy) from the cassette deck of TAPE 1/DAT terminals, to the cassette deck of TAPE 2 terminals.

TAPE 2 ► 1: To record (copy) from the cassette deck of TAPE 2 terminals, to the cassette deck of TAPE 1/DAT terminals.

⑭ LOUDNESS button/indicator

Use when listening at low volume levels.

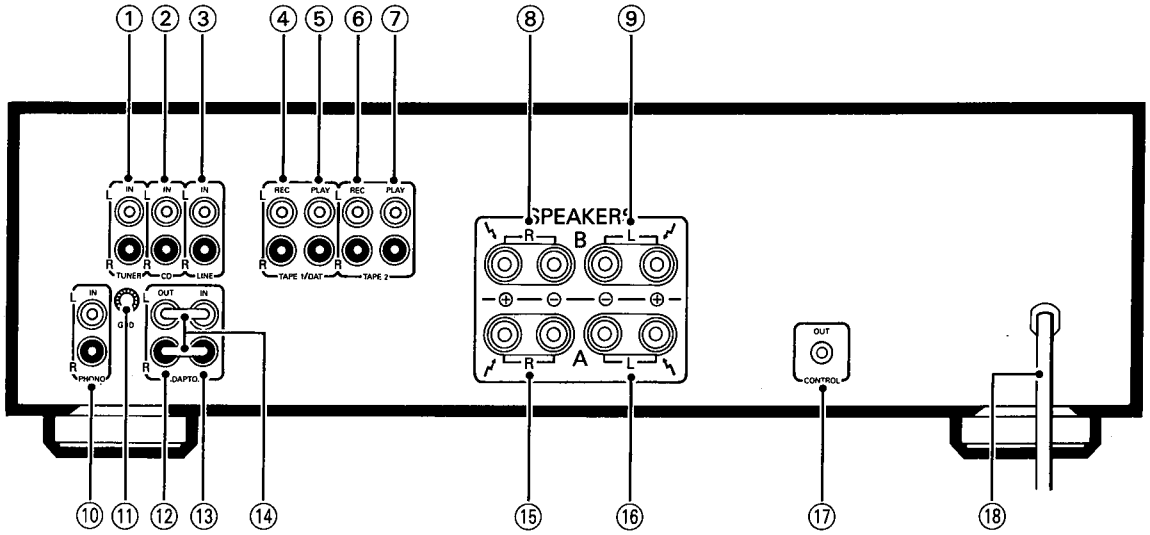
On: The indicator lights: Boosts low and high frequencies to give added punch to playback even at low volume levels.

Off: The indicator goes off: Should normally be left in this position.

NOTE:

This button does not operate when the DIRECT button is in the on position.

[REAR PANEL]



① TUNER terminals

② CD terminals

③ LINE terminals

④ TAPE 1/DAT REC terminals

⑤ TAPE 1/DAT PLAY terminals

⑥ TAPE 2 REC terminals

⑦ TAPE 2 PLAY terminals

⑧ SPEAKERS B terminals (right channel)

⑨ SPEAKERS B terminals (left channel)

⑩ PHONO terminals

⑪ Turntable ground terminal (GND)

⑫ ADAPTOR OUT terminals

⑬ ADAPTOR IN terminals

⑭ Shorting bars

⑮ SPEAKERS A terminals (right channel)

⑯ SPEAKERS A terminals (left channel)

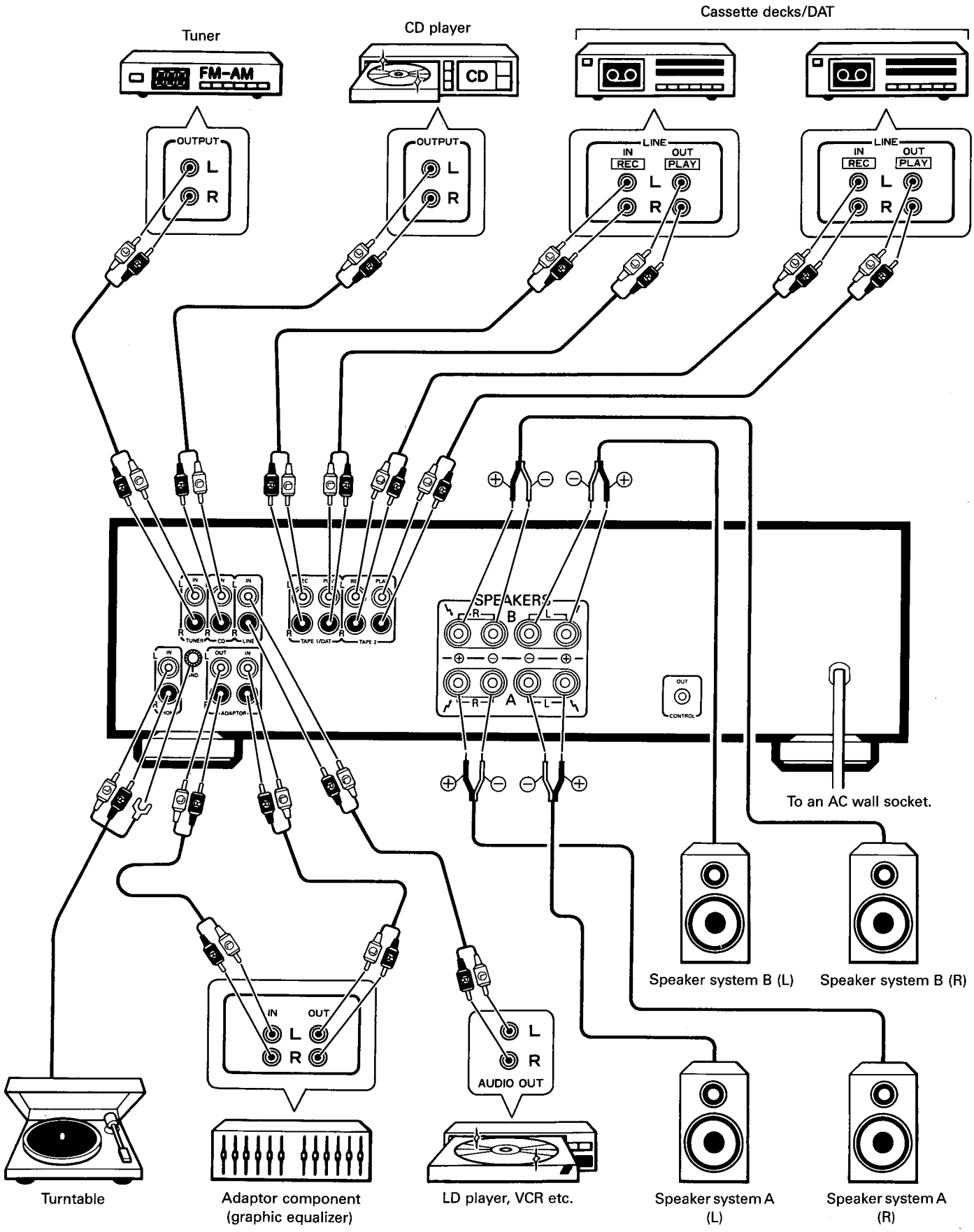
⑰ CONTROL OUT jack

This jack is for output of control signals when operating other components bearing the SR mark with the attached remote control unit.

⑱ Power cord

Connect this cord to an AC wall socket, or the AC outlet of an audio timer.

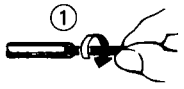
CONNECTIONS



Make all connections after unplugging AC cords.

CONNECTING THE SPEAKER CORDS

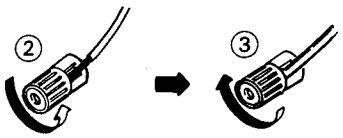
1. Strip off the vinyl covering and twist the tip of the wire core.



Twist the wire core.

2. Loosen the knob and insert the wire core into the terminal hole.

3. Tighten the knob to fix the wire core in place.



NOTE:

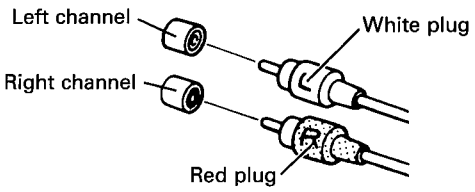
Do not allow the wire core to protrude and touch other terminals or wires. If the cores of differing wires touch, damage may be caused to your amplifier and/or speaker systems.

Speaker Impedance

When the speaker systems are connected to only SPEAKERS A or SPEAKERS B terminals, such speakers should have rated impedance in the range of 4 — 16 Ω.
When speaker systems are connected to both the A and B terminals, they should have a rated impedance in the range of 8 — 32 Ω.

CONNECTING THE INPUT/OUTPUT CORDS

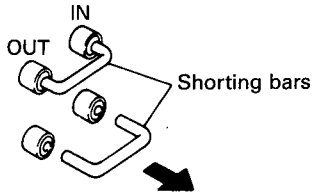
Connect the white plug to the L (left) channel, and the red plug to the R (right) channel. Be sure to insert the plugs securely.
The INPUT/OUTPUT jacks of this unit are tinplated, for high audio quality.



TO USE THE COMPONENT CONNECTED TO THE ADAPTOR TERMINALS

1. Set POWER switch to OFF.

2. Remove the two shorting bars from ADAPTOR terminals.



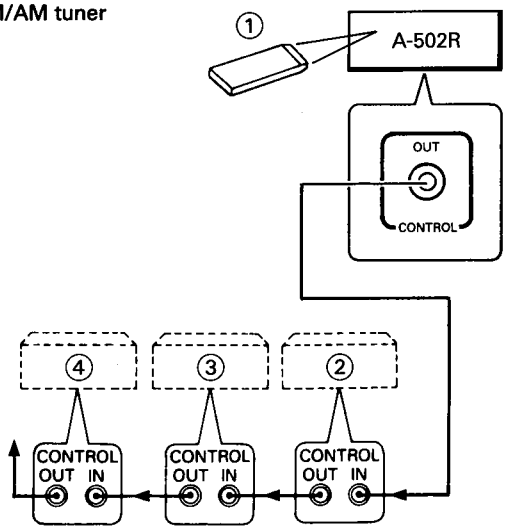
NOTE:

Remove the shorting bars before connecting an equalizer to these terminals. Always keep the bars inserted while the terminals are not in use, and take care not to lose them.

REMOTE CONTROL CORD CONNECTIONS

By interconnecting the CONTROL jacks of Pioneer units with the SR mark, the entire system can be operated with this remote control unit, although some of the units (FM/AM tuner, CD player, cassette deck, etc.) may not be equipped with remote sensors. The entire system can be operated by a remote control unit connecting PIONEER stereo components to each other using the control input (CONTROL IN) jack on each component. Use the remote control cord supplied with the respective unit for the connection. As long as you connect "OUT" to "IN", the connecting sequence is arbitrary. In case of a unit which has only an "IN" connector, connect it last.

① Remote control unit
② Cassette deck
③ CD player
④ FM/AM tuner



OPERATIONS

BEFORE BEGINNING OPERATIONS

1. **Set the POWER switch to ON. (STANDBY indicator goes off.)**
2. **Press the SPEAKERS selector button corresponding to the speaker system to be used.**
3. **Set the DIRECT button and MUTING button to OFF.**

PLAYBACK PROCEDURES

1. **Press the input selector button to the desired playback source.**
   - For playback with the equipment connected to LINE terminals: Set to [LINE].
   - For reception of an AM/FM broadcast: Set to [TUNER].
   - For playback of a record: Set to [PHONO].
   - For playback of a compact disc: Set to [CD].
   - For playback of a tape: Set to [TAPE 1/DAT] or [TAPE 2].
2. **Operate the equipment to begin playback.**
3. **Adjust playback volume with VOLUME control on this unit.**
4. **Adjust the tone to your preference using the BASS and TREBLE controls, and LOUDNESS button.**

RECORDING TAPES

1. **Select the recording equipment with REC SELECTOR switch**
   - When set to SOURCE, the signals from the device connected to the terminals of the selected input are recorded. (To record signals from the device connected to PHONO or LINE terminals, for instance set REC SELECTOR switch to SOURCE and set the input selector button to PHONO or LINE accordingly.)
   - Recording is impossible when the switch is set to OFF.

   NOTE:
   When REC SELECTOR switch is set to a position other than SOURCE and OFF, the equipment selected by REC SELECTOR switch can be recorded from, irrespective of the setting of the input selector buttons or DIRECT button.

2. **Begin recording by operating the recording equipment.**
   Refer to the operating instructions for your cassette deck for proper operating procedures.

Monitor while operating

On a 3-head cassette deck, sound can be concurrently heard while recording on tape. This operation of checking the sound quality and recording level is called "monitoring." For monitoring, the input selector button of this unit must be set to the cassette deck on which recording is being done.

- When recording with the cassette deck connected to TAPE 1/DAT terminals: Set to TAPE 1/DAT.
- When recording with the cassette deck connected to TAPE 2 terminals: Set to TAPE 2.

NOTE:
When recording from PHONO or LINE source, recording monitor is not possible.

COPYING TAPES

When two decks are used (or when using double cassette deck), you can record the sounds from one deck onto the other.

Application examples:

- To make a tape copy with contents identical to the original tape.
- To edit a recording of an FM broadcast in order to cut out unwanted commercials, recording only desired material onto another tape.

When using two cassette decks

1. **Load tapes for playback (pre-recorded tape) and recording (blank tape) into the respective cassette decks.**
2. **Select the copying direction with REC SELECTOR switch.**
   - When copying from the cassette deck of TAPE 1/DAT terminals to the cassette deck of TAPE 2 terminals: Set to 1 ► 2.
   - When copying from the cassette deck of TAPE 2 terminals to the cassette deck of TAPE 1/DAT terminals: Set to 2 ► 1.

   NOTE:
   The tape input selected with REC SELECTOR switch can be copied, regardless of the settings of the input selector and DIRECT buttons.

3. **Operate the cassette decks to begin copying.**
   Set the cassette deck with the original (playback) tape to the playback mode, and set the cassette deck with the blank tape to the recording mode.

Playback using a graphic equalizer

The sound of all sources can be finely adjusted with a graphic equalizer connected to ADAPTOR terminals.
However, the graphic equalizer is bypassed when DIRECT button is on.

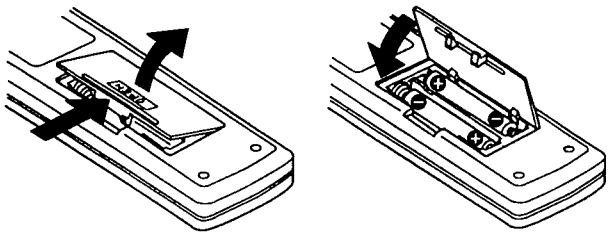
NOTE:
Be sure to perform this operation with the adaptor component power switch in the on position. Even when not using the adaptor component, its power switch must be left on. If the adaptor component is switched off, no sound will be produced, or the playback sound will be distorted.

Using an audio timer to perform timer recording

Connect this unit's power cord into the AC power outlet of an audio timer, and set the POWER switch to the ON condition (STANDBY indicator goes off) when making timer settings. If the unit is left in the standby mode (STANDBY indicator lights), timer operation will not be possible.

REMOTE CONTROL

LOADING BATTERIES



[1] Remove the cover of the battery compartment on the reverse side of the remote control unit.
[2] Take out the two size "AAA" [IEC R03(UM-4)] dry cell batteries supplied and load them into the battery compartment, taking care to follow the markings on the compartment.
[3] Replace the cover of the battery compartment.

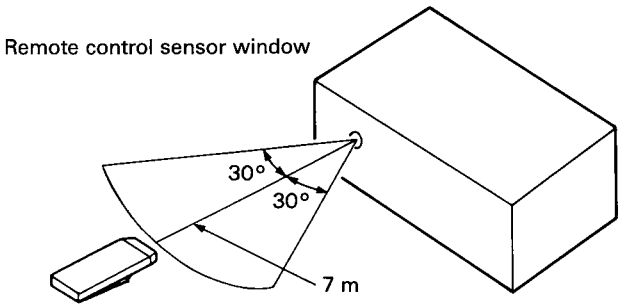
Incorrect use of batteries may lead to leakage or rupture. Always be sure to follow these guidelines:

1. Always insert batteries into the battery compartment correctly matching the positive ⊕ and the ⊖ polarities as indicated inside the compartment.
2. Never mix new and used batteries.
3. Batteries of the same size may have different voltages depending on their type. Do not mix different types of batteries.

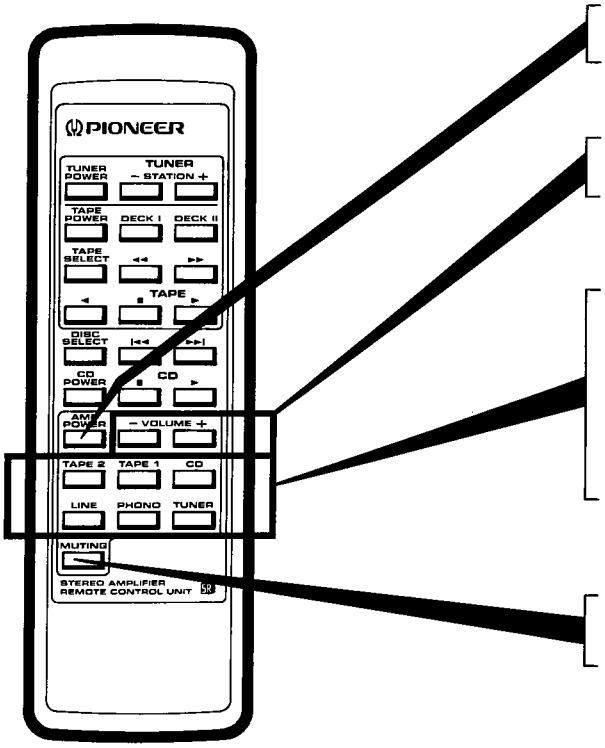
RANGE OF REMOTE CONTROL

When the remote control unit is pointed at the remote sensor window on the stereo amplifier and any of its keys is pressed, the unit and other components can be operated by remote control.
Distance: Within a range of about 7 meters from the unit's remote control sensor window.
Angle: Within approx. 30 degrees from the center of the unit's remote control sensor window.
Remote control will not be possible if there is an obstacle between the remote control unit itself and the unit's remote control sensor window.

- The accessory remote control unit can be used to control some functions of other Pioneer cassette decks, CD players and tuners (only those bearing the Pioneer mark SR).



- **Operating the A-502R**



AMP POWER: Switches the amplifier power STANDBY/ON.

VOLUME +: Increases the volume.
VOLUME –: Decreases the volume.

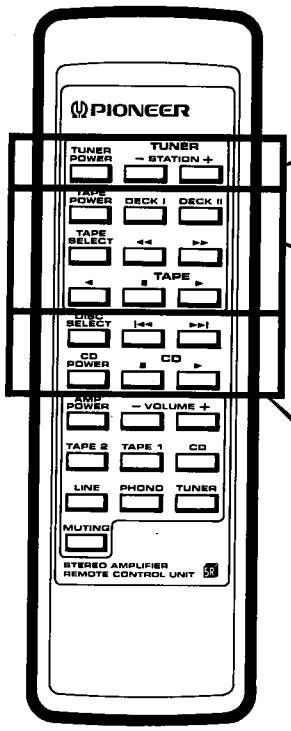
Input selector

TAPE 2:	TAPE 2
TAPE 1:	TAPE 1/DAT
CD:	CD
PHONO:	PHONO
TUNER:	TUNER
LINE:	LINE

MUTING: Press to lower the sound, and press again to return to the original volume level.

REMOTE CONTROL

- **To operate audio components (TAPE, CD, TUNER)**



TUNER

TUNER POWER: Switches TUNER power ON/OFF.
STATION –, +: Calls each station number in sequence.

TAPE (Cassette deck)

TAPE POWER: Switch the cassette deck power ON/OFF.
DECK I: To operate Deck I, press this button before pressing the operating buttons.
DECK II: To operate Deck II, press this button before pressing the operating buttons. Also when operating a single cassette deck, press this button before pressing the operating buttons.
◄◄, ►►: Tape fast forward.
TAPE SELECT: Selects the cassette No. (1 to 6) for multi-cassette changer.
►, ◄: Playback in the direction of the arrows.
■: Stop

CD (CD player)

DISC SELECT: Press this to select discs on a multi-play compact disc player.
I◄◄: Returns you to the start of the track playing. (Track search)
►►I: Takes you to the start of the next track. (Track search)
CD POWER: Switches CD player ON/OFF.
■: Stop
►: Play

NOTE:
When the accessory remote control unit is used to operate other PIONEER components with the SR mark, it cannot be used to operate functions which do not correspond to the functions listed on the remote control unit.

TROUBLESHOOTING

Incorrect operations are often mistaken for trouble and malfunctions. If you think that there is something wrong with this component, check the points below. Sometimes the trouble may lie in another component. Investigate the other components and electrical appliances being used. If the trouble cannot be rectified even after exercising the checks listed below, ask your nearest PIONEER authorized service center or your dealer to carry out repair work.

Symptom	Cause	Remedy
No power supplied to unit	• Power plug is disconnected from outlet. • The component power plug has been plugged into another component power outlet (e.g. timer, etc.) but power to that unit is disconnected. • POWER switch is set to OFF.	• Insert plug securely into outlet. • Turn on power to the other component. • Press the POWER switch to ON so that the STANDBY indicator goes off.
No sound	• Connecting cords are disconnected from terminals, or connected incorrectly. • Both of the shorting bars are disconnected from ADAPTOR terminals, and the DIRECT button is set to OFF. • Terminals, or connecting cords pin plugs are dirty. • The input selector button is not set to the desired input source. • Operation of other components is incorrect. • Both SPEAKERS selector buttons are set to OFF (■).	• Connect securely. • Connect the shorting bars securely. • Clean terminals and plugs. • Select the correct button (PHONO, TUNER, CD, LINE, TAPE 1/DAT, TAPE 2). • Consult the operating instructions for the other components. • Set one switch or both buttons to ON (▬).
No sound from one speaker	• Connecting cords or speaker cords are disconnected on that side.	• Connect securely.
Cannot record tapes.	• The position of REC SELECTOR switch is incorrect. • Connections are incorrect. • Operation of cassette deck is incorrect.	• Set switch correctly (See section "RECORDING TAPES"). • Reconnect properly. • Consult the operating instructions for the cassette deck.
Cannot perform tape copying	• The position of REC SELECTOR switch is incorrect. • Operation of cassette decks is incorrect.	• Set switch correctly (See section "COPYING TAPES"). • Consult the operating instructions for the cassette decks.
The remote control unit does not work. (Other components cannot be operated.)	• There are no batteries in the remote control unit. • The remote control sensor is not receiving any signals. • The battery compartment cover is not perfectly closed. • The remote control cord is not connected. • A fluorescent light is shinning on the remote sensor window.	• Load the remote control unit with batteries (see page 9). • Operate the remote control unit within the range of 7 meters and a angle of 30 degrees (refer to page 9). • Check that the battery compartment cover is closed correctly. • Connect correctly (see page 7). • Move so fluorescent light does not shine directly on amplifier front panel remote sensor window.

• *Malfunction may occur as the result of external influence, such as lightning or static electricity. To restore normal operation, set the POWER switch to OFF and then ON again or unplug the AC power cord and then plug it in again.*

SPECIFICATIONS

Amplifier Section

DIN Continuous power output (both channels driven at 1 kHz)
T.H.D. 1 %, 4 Ω ..... 100 W + 100 W*
T.H.D. 1 %, 8 Ω ..... 70 W + 70 W*
Continuous power output (both channels driven at 20 Hz to 20 kHz)**
T.H.D. 0.05 %, 4 Ω ..... 75 W + 75 W*
T.H.D. 0.03 %, 8 Ω ..... 55 W + 55 W*
Dynamic power output (on EIA dynamic test signal)
4 Ω/2 Ω ..... 110 W/135 W
Total harmonic distortion**
20 Hz to 20 kHz, 30 W, 8 Ω ..... 0.01 %*
Input sensitivity/impedance
PHONO (MM) ..... 2.8 mV/50 kΩ
CD, TUNER, LINE, TAPE ..... 200 mV/50 kΩ
PHONO overload level
1 kHz, T.H.D. 0.1 % ..... 150 mV
Output level/impedance
TAPE REC ..... 200 mV/1 kΩ
Frequency response
PHONO (MM) ..... 20 Hz to 20 kHz ±0.5 dB
CD, TUNER, LINE, TAPE ..... 5 Hz to 100 kHz, $^{+0}_{-3}$ dB*
Tone control (volume control set at −30 dB position)
BASS ..... ±8 dB (100 Hz)
TREBLE ..... ±8 dB (10 kHz)
Loudness contour (volume control set at −30 dB position)
..... +6 dB (100 Hz)/+3 dB (10 kHz)
Signal-to-Noise ratio (IHF short circuit, A network)
PHONO (MM, 5 mV input) ..... 89 dB*
CD, TUNER, LINE, TAPE ..... 107 dB*
Signal-to-Noise ratio (DIN, continuous power/50 mW)
PHONO (MM) ..... 72 dB/70 dB*
CD, TUNER, LINE, TAPE ..... 95 dB/80 dB*
MUTING ..... −20 dB

Power Supply/Miscellaneous

Power requirements ..... a.c. 240 Volts, 50/60 Hz
Power consumption ..... 500 W
Dimensions ..... 420 (W) x 360 (D) x 125 (H) mm
Weight (without package) ..... 8.4 kg

Accessories

Remote control unit 1
Batteries (IEC R03, AAA) 2
Operating instructions 1

NOTE:
Specifications and design subject to possible modification without notice, due to improvements.

* Measured when DIRECT button is set to on.
** Measured by Audio Spectrum Analyzer.

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